

REMARKS

Claims 18-34 are pending and under current examination. Applicants have amended claims 18, 26, and 34. Support for the amendments to claims 18 and 26 may be found in the specification at, for example, page 7, line 30 to page 8, line 20, and support for the amendment to claim 34 may be found in the specification at, for example, page 5, line 23 to page 6, line 3.

Final Office Action

Applicants respectfully traverse the following rejections:

- (1) rejection of claims 18, 19, 21, 22, 24-27, 29, 30, and 32-34 under 35 U.S.C. § 102(b) as being anticipated by “*FOREIGN-LANGUAGE SPEECH SYNTHESIS*,” XP002285739, *Proceedings of ESCA/COCOSD A Workshop on Speech Synthesis*, pp. 177-180, (1998) (“Campbell”);
- (2) rejection of claims 23 and 31 under 35 U.S.C. § 103(a) as being unpatentable over Campbell; and
- (3) rejection of claims 20 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Campbell in view of “*Multilingual Text-To-Phoneme Mapping for Speaker Independent Name Dialing in Mobile Terminals*,” RTO-MP-066, Sept. 2001 (“Jensen”).

Rejection of Claims 18, 19, 21, 22, 24-27, 29, 30, and 32-34 under 35 U.S.C. § 102(b)

Applicants request reconsideration and withdrawal of the rejection of claims 18, 19, 21, 22, 24-27, 29, 30, and 32-34 under 35 U.S.C. § 102(b) as being anticipated by Campbell.

The Final Office Action alleges that Campbell discloses, either expressly or inherently, each and every element of claims 18, 19, 21, 22, 24-27, 29, 30, and 32-34. *See* Final Office Action, pages 3-6. For example, in rejecting claims 18 and 26, the Final Office Action alleges that Campbell teaches a method and system for text-to-speech conversion “of a text in a first language comprising sections in at least one second language, comprising ... carrying out similarity tests between each phoneme of said phonemes of said second language being mapped and a set of candidate mapping phonemes of said first language.” Final Office Action,

pages 3-4. Campbell, however, does not disclose each and every element of Applicants' claims. Moreover, the Final Office Action mischaracterized Campbell.

Specifically, Campbell does not disclose or suggest at least Applicants' claimed "carrying out non-acoustic similarity tests ...said similarity tests performing a comparison between said phonemes of said second language and said set of candidate phonemes based on at least one feature, said at least one feature being independent of said first language and said second language," as recited in amended claims 18 and 26.

Instead, Campbell generally discloses "a method of concatenative speech synthesis for producing speech in a language other than that of a database speaker." Campbell, Abstract (emphasis added). Specifically, Campbell discloses "a method for a) selecting a sequence of segments that best match the sounds of the target speech through use of a mapping vector and b) using an intermediate synthesis stage." Campbell, section 1, paragraph 5 (emphasis added). Campbell also discloses that "[i]n the second stage of processing (Figure 4) we select speech waveform segments from the non-native speaker's database by comparing their acoustic similarity to the model speech synthesised using the native speaker's voice." Campbell, section 3.2, paragraph 4 (emphasis added). Furthermore, the mapping procedure disclosed in Campbell, is carried out by searching a look-up table providing a correspondence between all the phonemes of two languages.

Therefore, for performing text-to-speech conversion between any pair of languages, the mapping procedure disclosed in Campbell requires the additional burden of creating dedicated look-up tables expressing the correspondence between phonemes for each language pair. That is, while performing text-to-speech conversion between a pair of languages, the method disclosed by Campbell performs comparisons between phonemes based on features that are *dependent* on the pair of the languages. In contrast, amended independent claims 18 and 26

recite, “carrying out non-acoustic similarity tests between each phoneme of said phonemes of said second language being mapped and a set of candidate mapping phonemes of said first language, said similarity tests performing a comparison between said phonemes of said second language and said set of candidate phonemes based on at least one feature, said at least one feature being independent of said first language and said second language” (emphasis added).

Since Campbell does not disclose each and every element of independent claims 18 and 26, Campbell does not anticipate these claims under 35 U.S.C. § 102(b). Therefore, claims 18 and 26 should be allowable over Campbell. Dependent claims 19, 21, 22, 24, 25, 27, 29, 30, and 32-34 should also be allowable at least due to their dependence from base claim 18 or 26, as well as because they recite additional features not disclosed by Campbell. Applicants respectfully request reconsideration and withdrawal of the rejection.

Remaining Rejections of Claims 23 and 31, and 20 and 28, under 35 U.S.C. § 103(a)

Applicants request reconsideration and withdrawal of the remaining rejections of claims 23 and 31, and 20 and 28, under 35 U.S.C. § 103(a) as being unpatentable over Campbell, or over Campbell in view of Jensen.

As explained above, Applicants have established that Campbell does not disclose or suggest at least Applicants’ claimed “carrying out non-acoustic similarity tests ...said similarity tests performing a comparison between said phonemes of said second language and said set of candidate phonemes based on at least one feature, said at least one feature being independent of said first language and said second language,” as recited in amended claims 18 and 26.

Jensen fails to cure the deficiencies of Campbell. Jensen, for example, discloses experiments on “multilingual Text-To-Phoneme (ML-TTP) mapping for speaker independent name dialing.” Jensen, Abstract. Jensen discloses the use of acoustic modules and states that “they have been observed to give good performance when used for other languages based on

phonemes.” Jensen, section 4.1, paragraph 2. Jensen further states that “[t]he acoustic phoneme models in this work were based on a low complexity hybrid.” Id. Therefore, like Campbell, Jensen also fails to disclose or suggest at least “carrying out non-acoustic similarity tests ...said similarity tests performing a comparison between said phonemes of said second language and said set of candidate phonemes based on at least one feature, said at least one feature being independent of said first language and said second language,” as recited in amended claims 18 and 26 (emphasis added).

Therefore, Campbell and Jensen, whether taken alone or in combination, do not teach or suggest at least the above-quoted features of independent claims 18 and 26. Independent claims 18 and 26 should therefore be allowable over Campbell and Jensen. Dependent claims 20, 23, 28, and 31 should be allowable at least by virtue of their respective dependence from base claim 18 or 26, and because they recite additional features not taught or suggested in Campbell and Jensen. Applicants respectfully request reconsideration and withdrawal of the remaining rejections.

Conclusion

Applicants request reconsideration of the application and withdrawal of the rejections. Pending claims 18-34 are in condition for allowance, and Applicants request a favorable action.

The Final Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statements are identified herein, Applicants decline to automatically subscribe to any statements or characterizations.

If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: August 5, 2010

By: 

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